

CLAIMS

1. A method for producing a lymphocyte or antigen presenting cell (APC) having tolerance to an allergen or antigen which method comprises incubating a lymphocyte or APC obtained from a human or animal patient with (i) a composition capable of upregulating expression of an endogenous Notch or Notch ligand in the lymphocyte and/or APC and (ii) the allergen or antigen.

2. A method according to claim 1 wherein the method comprises incubating a lymphocyte or APC obtained from a human or animal patient with an APC in presence of (i) a composition capable of upregulating expression of an endogenous Notch or Notch ligand in the lymphocyte and/or APC and (ii) the allergen or antigen.

3. A method according to claim 1 for producing an APC capable of inducing in a T cell tolerance to an allergen or antigen which method comprises contacting an APC with (i) a composition capable of upregulating expression of an endogenous Notch or Notch ligand in the APC and (ii) the allergen or antigen.

4. A method according to claim 1 or claim 2 for producing *ex vivo* a T cell having tolerance to an allergen or antigen which method comprises incubating a T cell obtained from a human or animal patient with an antigen presenting cell (APC) in the presence of (i) a composition capable of upregulating expression of an endogenous Notch or Notch ligand in the APC and/or T cell and (ii) the allergen or antigen.

5. A method according to any one of claims 1 to 4 wherein the composition comprises a substance capable of upregulating expression of Notch or a Notch ligand selected from polypeptides and fragments thereof, linear peptides, cyclic peptides, synthetic and natural compounds including low molecular weight organic or inorganic compounds.

6. A method according to any one of claims 1 to 5 wherein the composition comprises a polypeptide selected from Noggin, Chordin, Follistatin, Xnr3, FGF and derivatives, fragments, variants and homologues thereof, and immunosuppressive cytokines, or a combination thereof.

7. A method according to claim 6 wherein the immunosuppressive cytokine is selected from IL-4, IL-10, IL-13, TGF- β and FLT3 ligand.

*Not
A2* 8. A method according to any one of the preceding claims wherein the Notch ligand is selected from Serrate, Delta and homologues thereof.

9. A method according to any one of the preceding claims wherein the APC is a dendritic cell.

10. A method for producing a lymphocyte or APC having tolerance to an allergen or antigen which method comprises incubating a lymphocyte or APC obtained from a human or animal patient with a lymphocyte or APC produced by the method of any one of the preceding claims.

11. A method according to claim 9 for producing *ex vivo* a T cell having tolerance to an allergen or antigen which method comprises incubating a T cell obtained from a human or animal patient with a T cell produced by the method of any one of the preceding claims.

12. Use of a lymphocyte or APC produced by the method of any one of the preceding claims in suppressing an immune response in a mammal to the allergen or antigen.

13. Use of a composition capable of upregulating expression of an endogenous Notch or Notch ligand in an APC or lymphocyte in a method of producing regulatory lymphocytes capable of suppressing the activity of other lymphocytes.

14. Use according to claim 13 wherein the composition is as defined in any one of claims 5 to 7.

15. Use according to claim 13 or 14 wherein the Notch ligand is selected from Serrate, Delta and homologues thereof.

16. Use according to any one of claims 13 to 15 wherein the APC is a dendritic cell.
17. A method of treating a patient suffering from a disease characterised by inappropriate lymphocyte activity which method comprises administering to the patient a lymphocyte produced by the method of any one of claims 1 to 9.
18. A method for producing a lymphocyte having tolerance to an allergen or antigen which method comprises incubating an APC produced by the method of claim 3 with the lymphocyte.

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